

REMARKS

In the Official Action dated December 14, 2004, the Examiner rejected Claims 26 and 27 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 26 and 27 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 24-26 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Legoues et al. (U.S. Patent No. 5,810,924) in view of Besser et al. (U.S. Patent No. 6,165,903). Claims 24-26 and 28 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Yoshimi et al. (U.S. Patent No. 5,698,869) in view of Besser et al.

This response addresses each of the Examiner's objections and rejections. Accordingly, the present application is in condition for allowance. Favorable consideration of all pending claims is therefore respectfully requested.

Insofar as the rejections of Claims 26 and 27 under 35 U.S.C. §112, first paragraph, are concerned, Applicants have canceled Claims 26-27 in this response. The cancellation of Claims 26-27 makes the rejections under 35 U.S.C. §112, first paragraph moot. Thus, reconsideration and withdrawal of the instant rejections under 35 U.S.C. §112, first paragraph are requested.

Before discussing the substantive rejections, applicants have amended Claim 24 to positively recite that the first layer of Ni monosilicide includes *0.01 to 50 atomic percent of at least one alloy additive selected from the group consisting of C, Al, Si, Sc, Ti, V, Cr, Mn, Fe, Co, Y, Zr, Nb, Mo, Ru, Rh, Pd, In, Sn, La, Hf, Ta, W, Re, Ir, Pt, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu*. Support for this amendment to Claim 24 is found at page 9, lines 7-22 of the specification of the instant application.

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In addition to the above amendment to Claim 24, applicants have added new Claims 29-32. New Claims 29 and 30 are supported at page 7, lines 11-18, while new Claims 31-32 are supported at page 9, lines 7-22. Since the newly added claims are fully supported by the specification of the instant application, entry thereof is respectfully requested.

With respect to the first obviousness rejection of Claims 24-26 citing the combination of Legoues et al. and Besser et al., Applicants respectfully submit that the claims of the present application are not obvious over that combination of applied references since neither reference teaches or suggests the structure recited in amended Claim 24. Specifically, the combined disclosures of Legoues et al. and Besser et al. do not teach or suggest an electrical contact to a region of a silicon-containing substrate comprising a substrate having an exposed region of a silicon-containing semiconductor material; and a first layer of Ni monosilicide, wherein said substrate and said first layer are separated by a Si-Ge interlayer and said first layer of Ni monosilicide includes 0.01 to 50 atomic percent of at least one alloy additive selected from the group consisting of C, Al, Si, Sc, Ti, V, Cr, Mn, Fe, Co, Y, Zr, Nb, Mo, Ru, Rh, Pd, In, Sn, La, Hf, Ta, W, Re, Ir, Pt, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Tb and Lu.

Legoues et al. do not disclose or suggest a layer of Ni monosilicide, as required by the claimed invention. Thus, the applied reference cannot teach or suggest the presence of at least one of the claimed alloy additives in the Ni monosilicide layer in the range recited in Claim 24. Furthermore, Legoues et al. do not motivate one skilled in the art to make the necessary modifications to arrive at the Ni monosilicide as required by the claimed invention. The present specification teaches that Ni monosilicide is a

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superior form of nickel silicide because it is etch resistant and is the lowest resistant silicide phase of Ni. See page 4, lines 19-22 of the specification.

Moreover, Legoues et al. disclose forming a graded Si-Ge layer which comprises a plurality of epitaxial grown Si-Ge layers having varying Ge content. In the present invention, the NiSi layer is separated from the Si substrate by an in-situ formed Si-Ge interlayer, not a plurality of Si-Ge layers wherein the Ge content varies in each layer to form a graded Si-Ge layer.

Besser et al. do not alleviate the deficiencies of Legoues et al since the applied secondary reference does not teach or suggest the presence of one of Applicants' claimed alloy additives within the claimed range in the disclosed Ni monosilicide layer. Applicants further observe that Besser et al. do not disclose a Si-Ge interlayer. As such, the combination of Legoues et al. and Besser et al. would provide a structure in which a Ni monosilicide (not containing one of the claimed alloy additives) is located on a graded Si-Ge layer in accordance with the disclosure of Legoues et al.

Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 24-26 under 35 U.S.C. §103(a).

Claims 24-26 and 28 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Yoshimi et al. (U.S. Patent No. 6,165,903) in view of Besser et al.

Applicants submit that the claims of the present application are not obvious in view of the combined disclosures of Yoshimi et al. and Besser et al. since none of the references teach or suggest an electrical contact to a region of a silicon-containing substrate comprising a substrate having an exposed region of a silicon-

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containing semiconductor material; and a first layer of Ni monosilicide, wherein said substrate and said first layer are separated by a Si-Ge interlayer said first layer of Ni monosilicide includes 0.01 to 50 atomic percent of at least one alloy additive selected from the group consisting of C, Al, Si, Sc, Ti, V, Cr, Mn, Fe, Co, Y, Zr, Nb, Mo, Ru, Rh, Pd, In, Sn, La, Hf, Ta, W, Re, Ir, Pt, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Tb and Lu.

Yoshimi et al. do not disclose or suggest a layer of Ni monosilicide as required by the claimed invention, let alone that such a layer includes the claimed alloy additive in the range recited in Claim 24. Applicants find no teaching or suggestion in Yoshimi et al. that would motivate one skilled in the art to make the necessary modifications to arrive at the Ni monosilicide as required by the claimed invention.

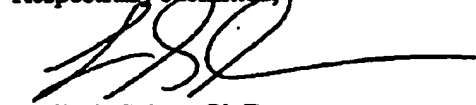
Besser et al. do not alleviate the deficiencies of Yoshimi et al since the applied secondary reference does not teach or suggest the presence of one of Applicants' claimed alloy additives within the claimed range in the disclosed Ni monosilicide layer. Applicants further observe that Besser et al. do not disclose a Si-Ge interlayer. As such, the combination of Yoshimi et al. and Besser et al would provide a structure in which a Ni monosilicide (not containing one of the claimed alloy additives) is located on a Si-Ge layer in accordance with the disclosure of Yoshimi et al.

Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection of claims 24-26 and 28 under 35 U.S.C. §103(a).

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In view of the foregoing amendments and remarks, it is firmly believed
that the present case is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,



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